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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/668,030  | 09/22/2003  | Clint S. Coleman     | 710101.1180         | 1426             |
| 24504   | 7590        | 04/27/2006           | EXAMINER            |                  |
| THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP<br>100 GALLERIA PARKWAY, NW<br>STE 1750<br>ATLANTA, GA 30339-5948 |             |                      | CHASE, SHELLY A     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2133                |                  |

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/668,030

**Applicant(s)**

COLEMAN ET AL.

**Examiner**

Shelly A. Chase

**Art Unit**

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 and 16-21 is/are allowed.
- 6) ☒ Claim(s) 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 9-22-2003, 11-1-04

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

  
**SHELLY CHASE**  
**PRIMARY EXAMINER**

### **DETAILED ACTION**

1. Claims 1 to 21 are presented for examination.

#### ***Information Disclosure Statement***

2. The references listed in the information disclosure statement submitted on 9-20-2004 and 11-1-2005 have been considered by the examiner (see attached PTO-1449).

#### ***Claim Objections***

3. Claim 16 is objected to because of the following informalities: please change the phrase "the desired FEC scheme" on lines 6 and 8 to --- a desired FEC scheme ---. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 13 to 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13, recites the limitation "over the one communication line" recited on line 9, there is insufficient antecedent basis for this limitation. The limitation is unclear and

the sentence seems to be incomplete. Claims 14 to 15 are rejected due to their dependency on a rejected base claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 13 to 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Klayman et al. (USP 5699365).

Claim 13:

**Klayman** teaches an adaptive forward error correction method for a data communication system having a plurality of communication channels; the communication system includes a primary station (101) coupled to a plurality of secondary stations (110<sub>a</sub> – 110<sub>m</sub>) via communications media (115 & 116). Klayman teaches that the communications media can have the form of optical fiber, coaxial cable or wireless (see col. 3, lines 1 to 8).

Klayman teaches that the method comprises the steps of the primary station transmitting/receiving forward error correction data, which includes user data ("payload data") and error correction code added to the user data to the secondary stations over the communications medium (see col. 5, lines 20 to 35). Klayman also teaches that the

data is encoded according to a forward error correction process using Reed Solomon error correcting codes (see col. 5, lines 55 to 60).

Klayman further teaches that the communication line transmitting the data is monitored for channel parameters such as bit error rate (BER) or packet error rate and a determination is made of the threshold level for the BER or packet error rate (see col. 7, lines 37 et seq.). Klayman teaches that if the detected error rate is outside the determined threshold then a revised forward error correction code is transmitted on a different communication channel (see col. 9, lines 30 to 39), interpreted as "disabling communication of the payload over the one communication line." Klayman also teaches that forward error correction may be disabled when a channel has sufficiently low noise (see col. 12, lines 17 to 23), interpreted as "disabling the encoding step when the error rate indicates a degraded performance of the one communication line."

As per claim 14, Klayman teaches monitoring channel parameters that include various error rates (see col. 7, lines 37 et seq.) and that many types of error correction codes may be used (see col. 5, lines 36 et seq.).

### ***Allowable Subject Matter***

8. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 1 to 12 and 16 to 21 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: the instant invention is directed to a communication system communicating over plural transmission lines using plural transceivers and a logic device and a communicating method communicating over a plurality of communication lines wherein a first error rate is determined without a forward error correction (FEC) scheme. The prior art made of record teaches a method and an apparatus for communicating over plural communication lines applying a FEC process to determine the error rate as detailed above; however, the prior art made of record taken alone or in combination fails to teach or fairly suggest or render obvious the novel features of the instant invention.

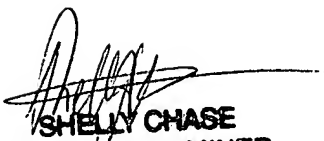
Specifically, the prior art made of record fails to teach or fairly suggest or render obvious a communication system comprising a logic configured to selectively enable the FEC module to implement a desired FEC scheme based on an estimated error rate associated with the first communication line and an estimated error rate associated with the second communication line as claimed in independent claims 1, 6 and 10. The prior art made of record also fails to teach or fairly suggest or render obvious a communication method that determines a first error rate without a desired FEC scheme and determining a second error rate associated with communicating the payload data over each of the communication lines using a desired FEC scheme as claimed in independent claims 16 and 19.

**Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A. Chase whose telephone number is 571-272-3816. The examiner can normally be reached on Mon-Thur from 8:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
SHELLY CHASE  
PRIMARY EXAMINER